CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

ORDER NO. 89-004
NPDES NO. CA0029505

WASTE DISCHARGE REQUIREMENTS FOR:

KAUFMAN AND BROAD - SOUTH BAY, INC.
I-880 and Dixon Landing Road
Milpitas, Santa Clara County

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The property of interest is a 100-acre parcel located southeast of the intersection of Dixon Landing Road and Penitencia Creek and is owned by Doudell Trucking Company and Diamond Tank Lines and Transportation, Inc. of San Jose. The site is being developed by Kaufman and Broad for residential use.

2. The discharger, Kaufman and Broad-South Bay, Inc., by application dated December 7,1988, applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharger Elimination system(NPDES).

3. The Regional Board has taken both past and present regulatory actions in regard to the Doudell Property. CAO 76-010 was issued against the site owners, Doudell Trucking and Diamond Tank Lines and Transportation, Inc., on March 29, 1976 to cleanup and abate all Class I wastes illegally disposed of on the property. The solvent was washings from magnetic tape manufacture at Memorex Corporation in Santa Clara. A representative of Memorex Corporation reports that the washings were predominately iron oxides in solid granular form with liquid solvent, methyl ethyl ketone (MEK).

4. In a letter dated April 30, 1976, Diamond Tank Lines informed the Regional Board executive officer that all buried material was removed and taken to Richmond Sanitary Landfill, Richmond, California and disposal of all Class I materials had been abated. The CAO was rescinded by letter dated June 26, 1978.

5. In September 1988 approximately 200 buried drums containing MEK, acetone, benzene, toluene, xylene and ethylbenzene were discovered in the western portion of the site. Soil pollution is attributed to past disposal to the ground surface as well as burial of drums containing pollutants. Results of soil gas and soil sampling surveys identify areas with soil pollution ranging up to 80,000 ppm (8 percent by weight) of total xylenes and MEK. Currently, 8,000 cubic yards of soil have been excavated from the site to an appropriate disposal facility. 189 intact drums have been removed from the site.

6. Currently, forty-five acres of the site is an existing Class III landfill/waste

management unit for sludge from Santa Clara Valley Water District(SCVWD) water treatment plants. The sludge treatment and disposal facility occupies the southern 45 acres of the property and is regulated under Waste Discharge Order No. 88-120. Nine sludge drying/disposal ponds exist on site. Pond No. 1 is currently the only pond that receives wet sludge from the SCVWD and is to be closed in July 1989.

7. The site is located within the Coast Range geomorphic province at the northern extent of the Santa Clara Valley and the southern portion of San Francisco Bay. The sediments underlying the site are relatively thin sequences of alluvium composed of predominantly clay, silty clay, and minor amounts of sandy clay, with interbeds of silty sand and sand. The Penitencia Creek flood control channel borders the site on the west and south sides (see figure one, site location map). The property is bisected by a drainage ditch, Sunnyhill Outfall Creek, into a northern and a southern half.

8. Shallow ground water exists in a saturated zone located approximately five feet below land surface. This zone is believed to be underlain at about 20-40 feet in depth by a clay aquitard. A confined aquifer containing good quality water underlies this aquitard. In the area with the buried drums, the near surface ground water flows southerly and westerly and surfaces as seepage into Berryessa and Penitencia Creeks. Certain parts of the property appear to be impacted by tidal intrusions into Penitencia Creek.

9. Excavation below the water table has been necessary to remove buried drums, debris and polluted soil. A dewatering system has been installed in two areas of excavation with drainage trenches installed upgradient and extraction wells downgradient to remove ground water from the excavations. Currently, dewatered ground water is pumped into a series of Baker tanks for temporary storage. A total of 60 tanks have been filled and 19 tanks remain to be discharged. Analysis of the water in the tanks has found the major pollutants to be 1) MEK, up to 130,000 ppb, 2) xylenes up to 390 ppb, 3) dichlorobenzene up to 35 ppb, 4) toluene up to 210 ppb 5) acetone up to 10 ppb, and 6) ethyl benzene at less than 3 ppb.

10. Stored water from the northernmost excavation is discharged into Sunnyhill Outfall Creek and water from the southernmost excavation is discharged into Penitencia Creek. Additional discharge points may be proposed with further site cleanup. These discharges are made after pollutant concentrations in the tank are below levels set by the Regional Board staff in a letter dated November 10, 1988. Water from the Baker tanks is being discharged on an interim basis with total flows from both discharges up to 300 gpm.

11. Off-site ground water wells within a mile of the site are found only in the deeper ground water aquifer at depths greater than 100 feet. These wells are used for industrial and domestic supplies.

12. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and discharge prohibitions for the Penitencia Creek and South San Francisco Bay.

13. The existing and potential beneficial uses for Penitencia Creek, South San Francisco Bay, and contiguous waters are as follows:

    a. Contact and non-contact water recreation
    b. Wildlife habitat

c. Brackish and salt water marshes
d. Fish migration and spawning
e. Commercial and Sport fishing
f. Preservation of rare and endangered species
g. Estuarine habitat

14. The existing and potential beneficial uses of the ground waters underlying the property are:

a. Municipal and Domestic supply
b. Industrial supply
c. Industrial service supply
d. Agricultural supply

15. The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses" (a)"at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined water, or any immediate tributary thereof" and (b) "to Alameda Creek (watershed) when no natural flow occurs."

16. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 15 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

17. Exceptions to the prohibitions referred to in Finding 16, and which apply to the discharger, are warranted because the discharge is an integral part of a program to clean up polluted soil and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this Order based upon Receiving Water Limitations B.1.e.

18. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin". The discharger's ground water extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

19. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering and geologic judgement as to best available technology economically achievable.

20. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

21. The Board has notified the dischargers and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

22. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharges, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. EFFLUENT LIMITATIONS

1. The effluent at the point of discharge to the surface waterways or to the ground shall not contain constituents in excess of the following:

	EFFLUENT LIMITS (ug/l)	
Constituent	Waterways	Ground
MEK	172	1720
Acetone	20	200
Benzene	5	5
Ethyl Benzene	5	5
Toluene	5	5
Xylenes	5	5

2. Stored water which meets the above waterways limits in A.1. may be discharged into Penitencia Creek and Sunnyhill Outfall Creek at the specified points of discharge providing that the following requirements are met by the discharger.

   a. Discharge shall be to Sunnyhill Outfall Creek at a point 150 feet from its confluence with Penitencia Creek, and to Penitencia Creek about 1500 feet upstream from its confluence with Sunnyhill Outfall Creek.

   b. Discharge shall be at a rate not to exceed a combined total of 300 gallons per minute.

   c. Precautions shall be taken to prevent erosion of Sunnyhill Outfall Creek as a result of discharge of stored water.

3. Stored water which meets the above ground discharge limits in A.1. may be discharge to the ground within the legal site boundaries for the purpose of dust control providing that the following requirements are met by the discharger.

   a. No stored water shall be discharged to the ground in areas planned for development as residential property.

   b. No surface runoff from the site shall occur as a result of discharge of extracted ground water to the ground.

   c. The site owner or the owner's representative provide weekly written updates to the Regional Board staff as required in a letter to the discharger dated December 8, 1988. This update should consist of a summary of activities of the last week and monitoring data. Documentation shall be submitted as part of the weekly report as to the concentrations, locations and amounts of stored water discharged to the ground. Data should be tabulated and presented graphically to show variations in discharge and water quality.

4. If tank water concentrations exceed effluent standards for discharge to waterways

or to the ground, appropriate treatment shall be provided to meet these requirements.

5. Toxicity - The survival of rainbow trout test fishes in 96-hour bioassays of the effluent discharge and shall be a median of 90% survival and a 90 percentile value of not less than 70% survival.

B. RECEIVING WATER LIMITATIONS

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:

   a) floating, suspended, or deposited macroscopic particulate matter or foam;

   b) bottom deposits or aquatic growths;

   c) alteration of temperature or apparent color beyond present natural background levels;

   d) visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e) toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a) pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

   b) Un - ionized Ammonia: 0.025 mg/l annual mean; 0.4 mg/l maximum at any time

   c) Dissolved Oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation.

3. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. PROVISIONS

1. The discharger shall comply with all sections of this order immediately upon starting any discharge. For the purposes of enforcing this Order, the discharger

shall be responsible for achieving full compliance with this Order within 24 hours of the Executive Officer's determination that the discharger has failed to comply with the requirements of this Order.

2. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer. As new ground water extraction and treatment systems are completed, the schedule of monitoring specified in Part B, Table 1, of the Self-Monitoring Program will be reviewed.

3. The discharger shall also notify the Regional Board if the self-monitoring program results indicate, or if a discharge or any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.

4. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated January 1987, except items A.10, B.2, B.3, C.8, and C.11.

5. The discharger shall perform a study to account for all volatile organics contained in extracted ground water stored in Baker tanks onsite. The study shall determine the amount of volatile chemicals released daily from the stored water into the atmosphere. This determination shall be based on monitoring data and a complete mass balance for each contaminant shall be documented for each Baker tank. Results of the study shall be presented as a technical report completed to the satisfaction of the Executive Officer, and submitted by June 18, 1989.

6. This Order authorizes only the discharge of untreated and treated extracted ground water as provided herein in each of Penitencia and Sunnyhill Outfall Creeks and to the ground surface for the purpose of dust control. If other discharge points are proposed, discharger is to submit an amended or new NPDES permit application. No other discharge is permitted under this Order until submittal of a technical report defining the full extent of soil and any potential ground water pollution, and until this permit is revised or permit is revised or the Executive Officer determines that permit revision is not necessary.

7. This Order expires July 18, 1989. The dischargers must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

8. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 18, 1989.

Steven R. Ritchie
Executive Officer

Attachments:

Figure One, Site Location Map
Standard Provisions & Reporting Requirements, December 1986
Self-Monitoring Program

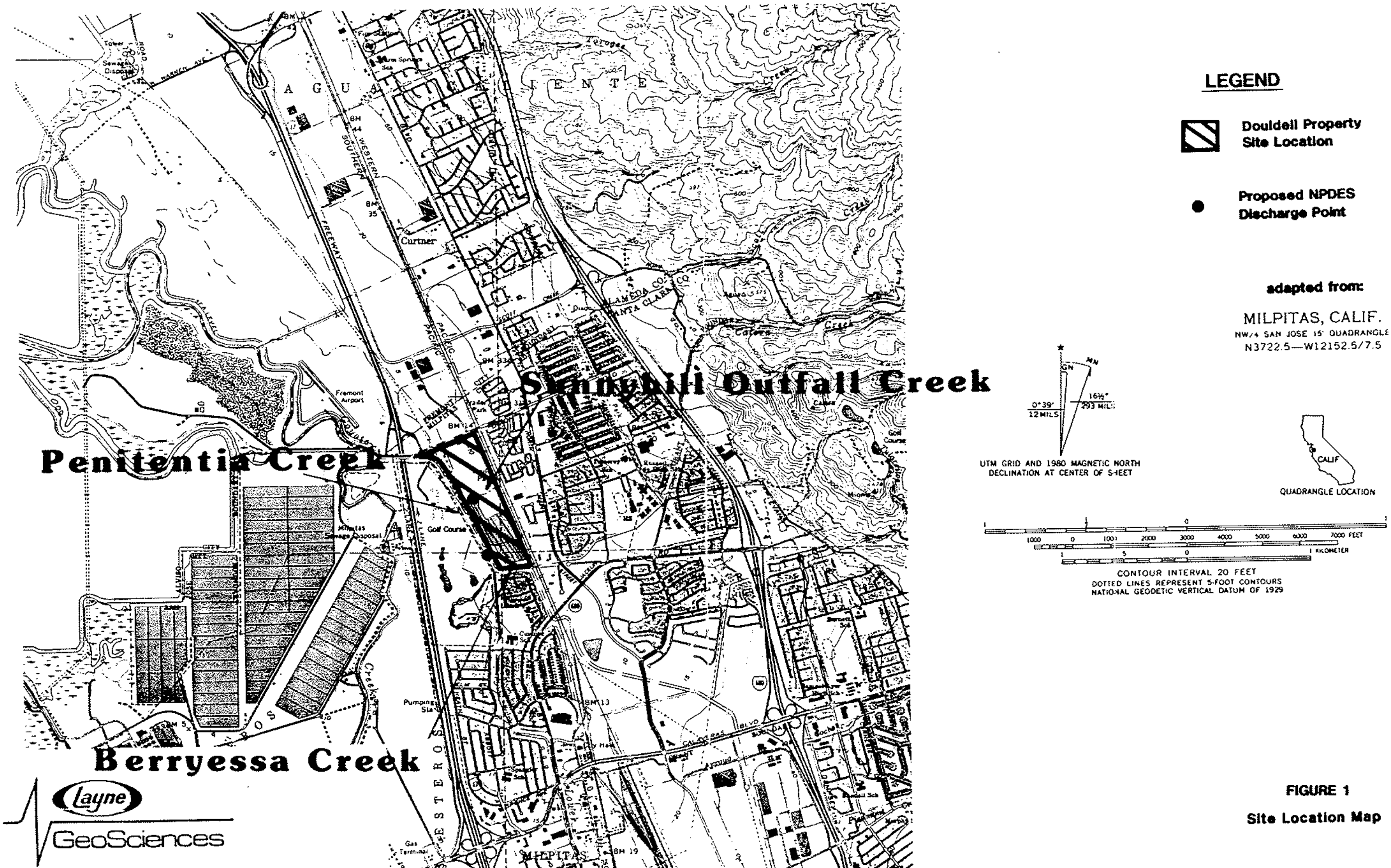

FIGURE 1

Site Location Map

Layne GeoSciences

Drawn by:	PS 11-16-08	Checked by:	QC 11-16	Drawing number	4165-2
		Approved by:	RJS 11-16		

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE

SELF-MONITORING PROGRAM

FOR

KAUFMAN AND BROAD
SOUTH BAY, INC.

MILPITAS, SANTA CLARA COUNTY

NPDES NO. CA0029505

ORDER NO. 89-004

CONSISTS OF

PART A, dated December 1986 and modified January 1987, including appendices A through E

PART B, Adopted: January 18, 1989

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Stations	Description
I-1	At a point in the north dewatering system immediately prior to discharge into storage tanks.
I-2	At a point in the south dewatering system immediately prior to discharge into storage tanks.
I-3 to I-XX	At a point in any additional ground water dewatering system(s) immediately prior to discharge into storage tanks. These points will be assigned by the discharger to each initiated dewatering system. Once assigned, each number will be used in all future extraction for the same system.

B. EFFLUENT

Stations	
E-1	At a point in the discharge line from any tank prior to release into Sunnyhill Outfall Creek.
E-2	At a point in the discharge line from any tank prior to release into Penitencia Creek.
E-3 to E-XX	At a point in the discharge line from any tank prior to release. These points will be assigned by the dischargers when additional discharge points are initiated. Once assigned, each number will be used in all future extraction for the same point in the line.

C. RECEIVING WATERS

Stations	
R-1	At a point in Sunnyhill Outfall Creek at least 100 feet but no more than 200 feet downstream from the discharge point.
R-2	At a point in Penitencia Creek at least 100 feet but no more than 200 feet downstream from the discharge point.
R-3 to R-XX	At a point in Penitencia or Sunnyhill Outfall Creek, or any surface drainage way, between 50 and 100 feet downstream from any effluent discharge point, established by the discharger.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given in Table I.

III. MISCELLANEOUS REPORTING

If any chemical additives are proposed to be used in the treatment of extracted ground water, it shall be reported 30 days prior to their use.

IV. MODIFICATION TO PART A

A. Deletions:

Sections D.1.a., D.2.a., D.2.c., D.2.f., D.2.g., D.2.h., D.3., D.5., E.3., and E.4.

B. Modifications

G.4. Written reports under G.4 shall be filed monthly.

G.4.b The report format shall be prepared in a format acceptable to the executive officer of the Regional Board.

G.4.e The report format shall be prepared in a format acceptable to the executive officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance.

G.4.e.1 Influent and effluent data summary reports shall be submitted only to the Regional Board executive officer, not to EPA.

G.5 By the 15th of each month, the discharger shall submit a report to the Regional Board covering the activities and data from the previous month.

I, Steven R. Ritchie, Executive Officer, herby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements extablished in Regional Board Order No. 89-004,

2. Was adopted by the Board on January 18, 1989.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer or Regional Board.

STEVEN R. RITCHIE
EXECUTIVE OFFICER

Attachment: Table I

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	I-2			E-1	E-2			R-1	R-2			
TYPE OF SAMPLE	G	G			G	G			G	G			
Flow Rate (mgd)	D	D			D	D							
BOD, 5-day, 20°C, or COD (mg/l & kg/day)													
Chlorine Residual & Dosage (mg/l & kg/day)													
Settleable Matter (ml/l-hr. & cu. ft./day)													
Total Suspended Matter (mg/l & kg/day)					Q	Q							
Oil and Grease (mg/l & kg/day)													
Coliform (Total or Fecal) (MPN/100 ml) per req't													
Fish Tox'y 96-hr. % Surv'l in undiluted waste					Y	Y							
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)	M	M			M	M			Q	Q			
Dissolved Oxygen (mg/l and % Saturation)	M	M			M	M			Q	Q			
Temperature (°C)	M	M			M	M			Q	Q			
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)	Y	Y			Y	Y							
Arsenic (mg/l & kg/day)	"	"			"	"							
Cadmium (mg/l & kg/day)	"	"			"	"							
Chromium, Total (mg/l & kg/day)	"	"			"	"							
Copper (mg/l & kg/day)	"	"			"	"							
Cyanide (mg/l & kg/day)	"	"			"	"							
Silver (mg/l & kg/day)	"	"			"	"							
Lead (mg/l & kg/day)	"	"			"	"							
Iron (mg/l & kg/day)	"	"			"	"							

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	I-2			E-1	E-2			R-1	R-2			
TYPE OF SAMPLE	G	G			G	G			G	G			
Mercury (mg/l & kg/day)	Y	Y			Y	Y							
Nickel (mg/l & kg/day)	"	"			"	"							
Zinc (mg/l & kg/day)	"	"			"	"							
PHENOLIC COMPOUNDS (mg/l & kg/day)	M	M			M	M			2/Y	2/Y			
All Applicable Standard Observations													
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)													
GC/MS Open Scan	M	M			M	M							
Methyl Ethyl Ketone	D	D			D	D			W	W			
Acetone	D	D			D	D			W	W			
BTX	D	D			D	D			W	W			

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
- Cont = continuous sampling
- DI = depth-integrated sample
- BS = bottom sediment sample
- O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations
- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- L = basin and/or pond levee stations
- B = bottom sediment stations
- G = groundwater stations

FREQUENCY OF SAMPLING

- E = each occurence
- H = once each hour
- D = once each day
- W = once each week
- M = once each month
- Y = once each year
- 2/H = twice per hour
- 2/W = 2 days per week
- 5/W = 5 days per week
- 2/M = 2 days per month
- 2/Y = initially, and then once each six months.
- Q = quarterly, once in March, June, Sept. and December
- 2H = every 2 hours
- 2D = every 2 days
- 2W = every 2 weeks
- 3M = every 3 months
- Cont = continuous